

Remarks

Reconsideration is respectfully requested in light of the foregoing amendments and remarks which follow.

Claims 1-8 are pending in this application. Claims 1, 2, 5, and 7 have been amended. Claims 1 and 2 have been amended to address points raised in the outstanding Office Action. Claim 5 has been amended to correct a typographical error. Claim 7 has been amended to place the claim in a better for examination.

The objection to claim 2 has been addressed by amendment so that the processing steps are clearly identified.

Claims 1 and 2 are rejected under 35 U.S.C. 102(b) as being anticipated by Bergstrom et al. (US Patent 6,384,125) and further evidenced by Griffith et al (US Patent 5,908,660 and Burns et al. (US Patent 6,051,672). Applicants respectfully traverse.

Claim 1 has been amended to more clearly identify the product. The product is identified in terms of the silica source- pyrogenically produced silica. In addition, please consider Table 3 and the claimed DBP value range relative to the "structurally modified" limitation. Claim 2 has been amended to more clearly identify the manipulative steps of the process, especially step c). Step c) was not fully considered by the Examiner for the reasons set forth in the Office Action. The product claim and the process claim are not similarly situated.

Bergstrom et al. has been reviewed. The product as now claimed is not evident. Griffith et al. or Burns et al. do not establish the inherent presence of the characteristics as present in the claims.

Bergstrom et al. do not teach pyrogenically produced silica. The Bergstrom et al. starting material is either precipitated or colloidal silica. These forms of silica are distinct from

pyrogenic silica. Neither Griffith et al. or Burns et al. establish that Bergstrom et al. inherently employed a pyrogenically prepared source of silica. Burns et al. do not mention pyrogenically produced silica. Griffith et al. only mention pyrogenic silica in the background section as having "crepe hardening" issues associated with its use as a filler. See col. 1. Such teachings do not establish that Bergstrom et al. inherently employed pyrogenic silica, especially when one considers the express language identifying the Bergstrom et al. silica source as being either colloidal or precipitated silica.

Further, Bergstrom et al do not employ a step analogous to step c). Neither Burns et al. nor Griffith et al. establish the inherent presence of step c) in the Bergstrom process. (There is no mention of structural modification of pyrogenic silica.) Since neither the source material nor the process as claimed is taught, expressly or inherently, there is no anticipation.

Withdrawal of the rejection is respectfully requested.

Claims 1-8 are rejected under 35 U.S.C. 102(b) as being anticipated by Barthel et al. (US Application 2003/0138715) and further evidenced by Scharfe et al. (US application 2003/0118499) and Mangold et al. (US Patent 5,976,480). Applicants respectfully traverse.

Claim 1 is directed to a silanised, structurally modified pyrogenically produced silica characterized by vinyl groups or vinyl silyl groups fixed to the surface, hydrophobic groups such as trimethyl silyl and/or dimethyl silyl and/or monomethyl silyl additionally being fixed to the surface. Claims 2-6 and 8 are directed to a process for its preparation. Claim 7 is directed to silicone rubber containing as a filler the silanised, structurally modified pyrogenically produced silica of claim 1.

The Barthel et al. teach the preparation of a low surface silanol-content silica by a

multistage process. The starting silica material is loaded with the silylating agent¹ at a lower temperature (paragraphs 50-57), the reaction proceeds at a higher temperature (paragraphs 58-60) and then the silylated product is purified (paragraphs 61-63). While Barthel et al. mention the use of mixtures of silylating agents, Barthel et al. do not teach mixtures of surface modifying agents that would lead to the claimed mixture of vinyl and hydrophobic groups. Further, while the Barthel et al. starting material is pyrogenic silica (paragraphs 18-25), there is no description of a structurally modified pyrogenic silica.²

Scharfe et al and Mangold et al. are cited as evidentiary references to establish the inherent presence of claimed characteristics in Barthel et al. published application. Neither reference establishes the presence of claimed step c) in Barthel et al. process, the mixture of surface modifying agents employed by Applicants or structural modification of the pyrogenic silica starting material.

There is no anticipation of the product or process claimed since Barthel et al. does not teach each and every element required by the claim, expressly or inherently.³ Barthel et al does not teach claim 2 step c). Barthel et al does not teach a silanized structurally modified pyrogenic silica (note claimed bulk density characteristic and Table 3). Barthel et al. do not teach surface modifying agents that would lead to the claimed mixture- both vinyl and hydrophobic groups. Withdrawal of the rejection is respectfully requested.

In view of the foregoing amendments and remarks, the application is believed to be in condition for allowance and a notice to that effect is respectfully requested.

1 A silylating agent is an organosilicon compound that replaces an activated hydrogen in an organic molecule with an organosilicon group.

2 There are no processing steps disclosed in Barthel et al. which are akin to those claimed. disclosed in the instant specification which suggest the possibility inherent structural modification- spray drying of pyrogenic silica followed by heat treatment, followed by a ball milling-type process to complete the structural modification. See Table 3 which shows a clear change in physical characteristics for the claimed product.

3 Please consider Nargiello et al. (US Patent 6193795), where a method of producing a low structure pyrogenic metal oxide filler by subjecting metal oxide agglomerates to a dry milling process is taught. The characteristics imparted by the structural modification are illustrated in Figures 1-3. There are no teachings in Scharfe et al. or Mangold et al., which are analogous to those provided in the '795 patent or the instant specification relative to structural modifications to pyrogenically produced silica due to mechanical action.

Should the Examiner not find the Application to be in allowable condition or believe that a conference would be of value in expediting the prosecution of the Application, Applicants request that the Examiner telephone the undersigned Counsel to discuss the case and afford Applicants an opportunity to submit any Supplemental Amendment that might advance prosecution and place the Application in allowable condition.

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Respectfully submitted,



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